

## **COMMUNITY FACILITIES - TRANSPORTATION**

### **Town of Eastham Goals and Performance Standards**

The Cape Cod Commission, through its Regional Policy Plan for Barnstable County, has established overall planning goals and minimum performance standards for transportation. Eastham's goals and minimum performance standards are consistent with the Regional Policy Plan in so far as the Town has local control of the transportation facilities enumerated.

- 4.1.1 Goal:** To foster a transportation system in Eastham for present and future year-round needs which is safe, convenient, accessible, economical and consistent with the Town's historic, scenic and natural resources.

#### Minimum Performance Standards

- 4.1.1.1 Where development or redevelopment takes place, it shall not degrade the future no-build levels of service (LOS) of surrounding roads and intersections below LOS C based on June through September peak hour traffic volumes. Levels of service shall be measured using performance indicators such as delay at intersections and volume to capacity ratio as defined in the Highway Capacity Manual. Where existing levels of service are below these specified levels, development and redevelopment shall maintain or improve performance indicators.
- 4.1.1.2 Developments of Regional Impact shall mitigate any traffic impacts that are created by such developments. The mitigation strategies shall include both structural and nonstructural improvements, with special emphasis on alternatives to private automobile transportation. Necessary improvements shall occur concurrently with any development, or a contribution of funds toward the necessary improvements shall be provided. All traffic mitigation measures on state highways must be in accordance with Massachusetts Highway Department access requirements, standards and policies. At a minimum, projects shall be evaluated using MEPA's Guidelines for Traffic Impact Assessment. In the case of a Development of Regional Impact, the Planning Board through its Site Plan Review process shall make recommendations concerning the mitigation of any traffic impacts as the Cape Cod Commission is considering for local approval and/or under review the specific development.
- 4.1.1.3 Where development and/or redevelopment takes place, permissible forms of mitigation are as follows:
- Alternatives to automobiles and reduction in peak hour site traffic including providing shuttle bus services, car or vanpooling and promoting pedestrian and bicycle accessibility.
  - Non-structural mitigation such as changes to pavement markings, signage, turn restrictions, limited removal of obstructions to provide safe sight distances and curb cut consolidations.

- Structural mitigation such as new signalization and intersection widening shall be permissible only under the following conditions:
  - Other methods (non-structural, access management or demand management) are not adequate to mitigate impacts,
  - The structural mitigation is necessary to accommodate June and September travel demands. Only non-structural mitigation is permissible to accommodate the peak season, July and August, travel demands,
  - There will not be degradation in natural, scenic and historic resources,
  - The structural mitigation will not adversely impact local roads.
- 4.1.1.4 Where development or redevelopment takes place, the Planning Board shall ensure that the developer provides adequate and appropriately designed on-site parking. In addition, the Planning Board shall encourage adjacent commercial uses to share parking and access points so as to minimize curb cuts and pavement coverage. Where appropriate, adequate off-site parking may be substituted for on-site parking.
- 4.1.1.5 Proposed developments shall conduct traffic impact analyses of the peak hour of the traffic generator or the peak hour of the adjacent side streets, whichever is worse. The analysis shall also include and evaluation of the summer peak hour condition.
- 4.1.1.6 Where appropriate, mixed-use development shall be encouraged in order to reduce automobile use between commercial and residential areas.

Other Development Review Policies

- 4.1.1.7 Appropriate plantings should be encouraged along roads to improve their appearance and provide screening, while not obstructing driver visibility, particularly at intersections.
- 4.1.1.8 Primary access points from large scale, high traffic-generating development should not be established where traffic is required to travel through areas with significantly lower densities or intensities.
- 4.1.1.9 Roadways and sidewalks should be designed to accommodate access for the disabled.
- 4.1.1.10 Replacement, relocation or installation of utility poles shall not be allowed if such replacement, relocation or installation would interfere with automobile, pedestrian, or bicycle safety based on site distances, useable sidewalk width or clearance from the traveled road surface.

- 4.1.1.11 Signage and lighting and other necessary appurtenances shall not interfere with safe site distances or create distractions for drivers.

**4.1.2 Goal:** To develop alternate modes of transportation so as to reduce dependence on private automobiles.

Minimum Performance Standards

- 4.1.2.1 Developments of Regional Impact shall make provision for alternate transportation modes to offset at least 20% of their projected traffic volumes. Acceptable alternatives include but are not limited to carpool programs, shuttle bus service and related programs to ensure a 20% reduction in vehicle trips to and from the site. In lieu of providing these services in-kind, the developer may make a contribution to the Cape Cod Regional Transit Authority or a private transit company approved by the Commission in order to provide public transportation. When the Cape Cod Commission is considering a Development of Regional Impact, the Planning Board shall make recommendations for alternate transportation modes to offset at least twenty (20) percent of the projected traffic volumes.
- 4.1.2.2 Development or redevelopment shall incorporate provisions for bicyclists and pedestrians such as bicycle racks, secure storage areas, connections to bicycle paths and other pedestrian connections.
- 4.1.2.3 Roadway construction and upgrades shall include provisions for bikeways, where appropriate. Roadway safety features such as adequate lane and shoulder widths, smooth pavements and bicycle responsive traffic signals, shall be included. When roadways and sidewalks are being constructed or upgraded, active consideration should be given to opportunities for removing utility poles and undergrounding existing utility lines.

Other Development Review Policies

- 4.1.2.4 Bicycling and walking should be encouraged as an alternative to automobile trips. Where appropriate, historic footpaths should be maintained and safe bicycle links to regional bicycle networks should be established. Where feasible, bikeways and footpaths between existing subdivisions are encouraged in order to open up through-linked bicycling and walking routes away from major roads.
- 4.1.2.5 Existing transportation rights-of-way should be retained for future transportation uses.
- 4.1.2.6 Where appropriate, developments should provide bus turnouts, taxi stands, and related facilities.

- 4.1.2.7 Opportunities for other forms of public transportation including bus, rail, ferry and shuttle vans should be expanded in order to serve visitors and residents.

### **Existing Conditions**

Transportation is one of the most difficult issues facing Cape Cod and communities like Eastham. Providing mobility in the face of funding limitations is difficult enough. Combined with the competing issues of community character, impacts to natural resources, the seasonal nature of the traffic problem and an increasing public transit dependent population before transportation issues become critical.

Eastham's existing transportation system consists mainly of roads, as opposed to other means of transportation. Today, approximately 95% of all trips in Eastham are via the private automobile. Bus rider ship, walking and bicycling together total only 5% of trips. In part, this reflects the fact that existing year-round public transportation services are limited and have been neither encouraged nor studied by local government. Similarly, the appeal of bicycle transportation is constrained by the absence of east-west bike paths outside the National Seashore, and the lack of bicycle racks and secure storage bins at commercial centers in both Eastham and Orleans.

The annual expenditure on maintenance and repair of Eastham's 61 miles of town owned roads as well as the state owned portion of the transportation system (Route 6) is \$150,000 per year. Current capacity throughout the town owned road network meets all but the summer travel demands. Peak travel demand on Route 6 during the summer-results in severe congestion in South Eastham leading to the Rotary as well as congestion near the signalized intersections in town. Traffic at intersections at Brackett Road and occasionally at Samoset operates at reduced levels of efficiency.

Although the capacity constraints occur primarily during the summer, safety problems occur on a year-round basis. Based on the latest available accident records, Route 6 in Eastham has a higher accident rate than any other section of Route 6 on Cape Cod. It appears that conflicts between through traffic and local turning traffic along the four-lane highway are largely responsible. Speed and inattentive drivers contribute to extensive property damage and loss of life in these accidents. As a result of the number and severity of vehicle accidents, police surveillance has been increased resulting in a substantial reduction in all types of accidents.

The annual average daily traffic (AADT) total volumes for Route 6 in 2001 ranged between 19,459 at the Eastham/Wellfleet town line to 26,864 just south of the Cape Cod National Seashore Visitor's Center. For further traffic count data for locations sampled along Route 6 and significant local roads, please refer to the Cape Cod Commission's annual traffic counting reports containing ten year periods of counting information.

This plan strives to create a vision for an integrated transportation system. It recognizes the importance of Route 6 to the town and regional road system; the need to make Route 6 safe and efficient; and that maintaining/preserving character and environmental resources are important priorities when considering widening roads and intersections. It identifies the preference for adjusting current development potential through open space acquisition, land use changes, and

the provision for public transportation stops at appropriate residential and commercial locations. It also recognizes that coordination with our neighboring communities; the region and the State are necessary to address our transportation issues. This could be accomplished by active participation on the Cape Cod Regional Transit Authority, involvement and input with the Cape Cod Transit Task Force, and working closely with the National Park Service.

Eastham is primarily a residential community with 33% of the current developed land devoted to residential uses. The largest landowner in the Town is the National Seashore, which comprises 33% of the Town (See Land Use Section). Furthermore, nearly 60% of the homes are used seasonally. Eastham's existing transportation system consists of roads, limited bus service and bicycle/pedestrian travel. Eastham residents, like those in most other Cape communities, rely primarily on the automobile for transportation. The Cape Cod Rail Trail, a regional bicycle path, traverses the length of Eastham. A sidewalk runs along the West Side of Route 6 in Eastham. In addition, there are recreational bicycle paths and walking trails within the Cape Cod National Seashore. There are several bus stops located in Eastham that are not user friendly, nor is signage or shelter provided.

### Roadways

A total of approximately 6 miles of State road (U.S. Route 6) and 61 miles of accepted Town roads exist in Eastham. [See Map 10 - Streets on following page.] Route 6 is classified as a Principal Arterial by the Cape Cod Commission, and begins on Cape Cod at the Bourne/Wareham town line and ends in Provincetown, the northern most point on the Cape. This State Highway is a 4 lane undivided roadway in Eastham. It bisects the Town (east/west) running 6 miles in length from the rotary at the Orleans border to the south, to the Wellfleet town line in the North. The speed limit along Route 6 is 40 miles per hour. The Eastham/Orleans Rotary is posted at 25 miles per hour.

Land along Route 6 in Eastham is used for residential development, the Town municipal complex at the intersection of Samoset Road and several areas of high and low-use commercial activity. Millions of travelers have and will utilize this route yearly to access the Cape Cod National Seashore. Route 6 is considered to be one of the heaviest traveled roadways (over 30,000 vehicles per average summer day on Route 6 in South Eastham) on the Cape and in Eastham serves the dual role of carrying through traffic to and from points further out on the Cape, and functioning as the Town's "Main Street". Local pedestrian and vehicular traffic competes with through (high-speed) traffic. Conflicts of the residential traffic with through traffic result from slower stop-and-go traffic caused by frequent crossings, left-hand turns, and access to and from driveways along Route 6.

During peak hours in the summer, congestion occurs along Route 6 between the Salt Pond Road traffic signals and the Orleans rotary. A major volume travels to the National Seashore and to

**Map 7:** Eastham Street Map

Provincetown for whale watching and other activities. Current winter conditions along this same segment of Route 6 are considered not congested. Projections for future “off season” volume are for high to very high congestion.

Paralleling Route 6 to the west, Bridge Road, Herring Brook Road and Massasoit Road form a secondary link between the Towns of Orleans and Wellfleet, and link residential neighborhoods. These roads are primarily residential in nature. Nauset Road to the east of Route 6 links the Salt Pond area of Town to North Eastham. Primarily residential in nature, Nauset Road also carries traffic associated with the Cape Cod National Seashore and the Nauset Regional High School. These roads are generally not congested anytime during the year.

Samoset Road which runs from Route 6 at the Town Hall west to First Encounter Beach and Brackett Road from Nauset Road westerly to Route 6. These roads are generally not congested during the late fall and winter months. See Maps 11 and 12, also see Map 8 – Functional Classification Map on following page.

The condition of existing local streets differs widely. Some have adequate pavement and shoulders; others are not well paved and are of irregular widths. The Town has recently completed a pavement management plan and initiated improvements.

There are no intersections with a significant number of major accidents on Route 6 north of Brackett Road to the Wellfleet town line. See also Map 13, Traffic Problem Area Map on next page. Locations where there are a significant number of major accidents [one thousand dollars (\$1,000) and/or personal injury] along Route 6 are listed below, along with the number of accidents and the year in which they occurred from 1991 to date.

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**Table 21:** Major Traffic Accidents along Route 6

<b>Year</b>	<b>Orleans Rotary</b>	<b>Governor Prence Rd.</b>	<b>Samoset Road *</b>	<b>Nauset and Locust Roads *</b>	<b>Massasoit Road</b>	<b>Main St. Mercantile</b>	<b>Bracket Road</b>	<b>Misc.</b>
1991	6	4	20	6	6	5	8	
1992	6	10	11	6	2	4	6	
1993	7	6	13	5	7	7	5	
1994 **	8	4	7	7	3	3	16	
1999	2	2	12	5	2	8	7	13
2000	5	1	7	1	4	4	9	8
2001	2	4	13	2	3	11	2	11

\* Location with pedestrian crossings

\*\* As of December 6, 1994

*Source: Eastham Police Department*

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**Map 8:** Transportation Classification Map



**Map 9:** Road Volume/Capacity Ratio – Route 6 - Current Conditions in Winter

**Map 10:** Road Volume/Capacity Ratio – Route 6 - Current Conditions in Summer

**Map 11:** Traffic Problem Area Map

In addition to Route 6, the intersection of Brackett Road and Old Orchard Road, has experienced a higher than normal number of traffic accidents. Roadside hazards include utility poles along Route 6 and other town roads. They are a potential traffic hazard for drivers inadvertently traveling off the roadway and, when damaged, may result in an interruption in power.

### Bicycle and Pedestrian

The former New York, New Haven & Hartford Railroad was sold to the Commonwealth, which subsequently cleared the track to pave a bicycle and pedestrian trail known as the Cape Cod Rail Trail. This former railroad bed runs the length of Eastham, approximately six (6) miles, crossing under Route 6 near Old Orchard Road. The Commonwealth maintains this facility, although there are no public parking facilities in Eastham along this path. In addition, the Cape Cod National Seashore maintains a bicycle trail from the Salt Pond Visitors Center to Coast Guard Beach, both of which provide parking facilities. The Cape Cod National Seashore bicycle path and the Cape Cod Rail Trail are connected via a signed bicycle route along Locust Road.

Provisions for bicyclists and pedestrians are abundant throughout the lands of the Cape Cod National Seashore. These serve transportation (access to beaches) as well as recreational uses. However, information for users is extremely limited.

Route 6, which as noted earlier is the “Main Street” in Eastham, bisects the Town and has sidewalks on the western side, along its entire length in the Town. Signal controlled pedestrian crossings exist at the intersections of Samoset Road and Salt Pond Road with Route 6. Salt Pond Road provides access to the Seashore's Salt Pond Visitor Center. These receive low to moderate pedestrian use. Upgrades to add or improve pedestrian crossings are planned at Salt Pond/Nauset Road and Brackett Road for pedestrian phases. Year round maintenance of sidewalks is necessary to improve and promote pedestrian travel including: plowing sidewalks of snow in winter; brushing, mowing and trimming in summer; and annual sweeping. No other signalized intersections along Route 6 provide special signal phasing for pedestrians, although crosswalks are provided on two approaches at Brackett Road.

### Public Transportation

Public transportation to and from Eastham is limited - lacks information about scheduling, coordination, etc. The Plymouth & Brockton Street Railway Company (P & B) makes a regular stop at and across from the Town Hall on Route 6, and provides service from Hyannis to Provincetown and points in between. Additional stops are provided, as needed, requiring the passenger to hail the bus or request a drop-off along Route 6. During the winter, P&B operate two buses between Provincetown and Hyannis, and during the summer operate six buses. Travel from Eastham to Hyannis is 45 minutes and to downtown Boston is 2 hours and 40 minutes via the P&B. Some Eastham residents drive to the Barnstable commuter lot at exit 6 and Route 6, park their cars and ride the P&B hourly express bus to downtown Boston or to Logan Airport.

The Cape Cod Transit Authority runs an on-call transportation service called the B-Bus. Reservations must be made at least a day in advance for this service which provides passengers a ride from their home for medical appointments, shopping trips, as well as medical trips to Boston on weekdays. The Eastham Council on Aging provides a volunteer-run van service for those residents over sixty who require assistance in transportation to medical appointments and shopping areas. The Council also provides transportation to special programs, events and field trips for seniors. In addition, the Nauset Region Fish provides volunteer passenger car service for medical appointments and errands to residents in the Lower Cape region. Taxi service is available from Nauset Taxi in Orleans but requires advance scheduling and a fee. Free summer bus shuttles are operated by the National Seashore between the Little Creek Parking area and Coast Guard Beach. However, all cars are charged a fee to park except those with Eastham parking stickers.

Much work is now being done by the Cape Cod Transit Task Force to address specific Lower Cape Transportation needs, e.g., a mini transit center in Orleans; shuttle service from Orleans to Provincetown; and more marketing of public transportation for year-round use and for summer visitors. Eastham should be actively involved in all these and future efforts.

The closest Park and Ride lot available to Eastham residents and visitors is located in Harwich at Exit 10 off of the Mid Cape Highway (Route 6). This lot is intended for use by travelers heading to similar destinations, providing parking area to promote carpooling.

Fixed route bus service in the vicinity of Eastham includes the H<sub>2</sub>O Breeze. The H<sub>2</sub>O Breeze departs from the Orleans Stop and Shop (just south of the Eastham Rotary) and travels along Route 28 terminating in Hyannis. Stops are made in Orleans, Chatham, Harwich, Dennis, Yarmouth and Hyannis. This bus service runs from late June to Labor Day weekend in September.

### Parking

Town controlled public parking facilities exist at Eastham's Town Beaches and Landings, the Public Library, the Town Hall, Rock Harbor, and the Eastham Elementary School. In addition, there is parking at the Nauset Regional High School, and the Cape Cod National Seashore's Salt Pond Visitors Center, Nauset Light Beach, Doane Rock Parking Area, Little Creek Parking Area and Coast Guard Beach. Parking for commercial facilities both large and small exist primarily along Route 6 on the premises of the businesses. There is a need for additional study of future parking needs, including secure and convenient bicycle parking, parking for possible new beach use; shuttle parking facilities; parking for cars to drop-off/pick-up shuttle riders.

A Beach Committee has been organized and pursuing a parking lot for approximately 300 vehicles. This beach area is to be located mid-way between the existing Nauset Light and Coast Guard Beaches. This will be primarily for Eastham residents – 250 spaces and 50 spaces for non-residents. This comes at a time when the National Park Service is curtailing both parking accommodations and limited number of the public on beaches.

This proposed new beach parking lot would result in direct vehicle trip impacts on Doane Road, Ocean View Drive and Cable Road. Increased vehicle trips would also be experienced on roads such as Brackett Road, Nauset Road and Route 6. The results of a comprehensive traffic impact analysis and appropriate mitigation measures to offset identified impacts would need to be considered as part of the planning and approval process for this proposed project. Potential mitigation measures could include, but not limited to, incorporating design measures to encourage alternatives to automobiles such as safe pedestrian access, adequate bicycle provisions and/or convenient shuttles to reduce new vehicle trips.

To summarize, the existing conflicts in transportation with present growth and land use include:

- Portions of Route 6 are congested during peak hours in the summer months. Traffic demands on Route 6 result from the amount of present land development served by Route 6 and growth in summer population, tourists and visitors within the sub-region, and the lack of sufficient, accessible, consistent public parking.
- Over capacity conditions currently exist along Route 6 for travel to and from other Outer Cape towns, resulting in long delays during peak hours in the summer.
- Currently, the number of access locations and the spacing of access to private developments along Route 6 are inconsistent with the roadway function as a major road. Traffic exiting private development at uncontrolled intersections experience long delays during peak hours all year around. Currently, many developments along Route 6 have no alternatives to Route 6 for locating access to the property.
- Currently there are insufficient alternatives to the automobile for travel within the Town and for trips made to and from the Outer Cape area.

### **Analysis of Future Conditions**

The Outer Cape Capacity Study conducted in 1995, and more recent studies which predict increased traffic in the “off season”, the Cape Cod Commission characterized future summer peak hour travel demands with several land use scenarios and with the existing transportation system. The three future land use scenarios developed include:

- Future Land Use in Year 2020 with Current Zoning
- Build-Out under Current Zoning, likely to occur after Year 2020
- Build-Out with a Conversion of Two-Thirds of Seasonal Housing to Year-round

For each of these land use scenarios, no changes in the existing roadway system, no changes in the current use of alternative modes, and no increase in the amount of tourists visiting area attractions were assumed in the study.

Peak Travel Demands with Future Land Use in Year 2020 with Current Zoning

A forecast of future year 2020 traffic levels was developed which reflect anticipated increases in development and growth in background traffic. Traffic conditions were analyzed which assumed no increase in roadway capacity. The results of this analysis indicate that the entire length of Route 6 in Eastham is projected to operate at over capacity conditions during the summer. The analysis also indicates that over capacity conditions would occur on Bridge Road, which parallels Route 6. In addition, the southern portion of Herring Brook Road, also paralleling Route 6 would be congested. During winter, only about one mile of Route 6, the segment just north of the Orleans rotary would be congested. Thus, winter conditions will be approaching current summer traffic conditions with congestion expected along Route 6 north of the Orleans rotary. This trend is consistent with growth in traffic from the last 20 years all over Cape Cod. See Maps 14 and 15.

Peak Travel Demands at Build-Out under Current Zoning

During peak hours in the summer, traffic conditions under this scenario are projected to be worse than projected for the Future Land Use in Year 2020 with current zoning. During the peak hours in the summer, the entire length of Route 6 and Bridge Road would continue to operate over capacity, and all of Herring Brook Road but north of Old State Highway/Oak Road would operate over capacity. Some portions of Herring Brook Road north of this location would be congested.

During the peak hours in the winter, the same conditions would continue as described in the Future Land Use in Year 2020 with current zoning. Only about one mile of Route 6, the segment just north of the Orleans rotary, would be congested. See Maps 16 and 17.

Peak Travel Demands at Build-Out and a Conversion of Two-Third Seasonal Housing to Year-round Residential Use

During the summer peak hour, traffic conditions are projected to be the same as described in the Build-Out with current Zoning Scenario. The entire length of Route 6 and Bridge would continue to operate over capacity, and all of Herring Brook Road but north of Old State Highway/Oak Road would operate over capacity. Some portions of Massasoit Road north of Old State Highway/Oak Road would be congested.

During the peak hours in the winter, traffic conditions would be worse than described in the Build-Out with Current Zoning Scenario. Route 6 between the Salt Pond Road traffic signals and the Orleans rotary would be over capacity. The remaining portion of Route 6 would be congested. At the same time, the entire length of Bridge Road would be congested. See Map 18.

Thus, during peak hours all year-round, the entire length of Route 6 would be congested with some segments over capacity. At the same time, segments of other parallel roads would be congested.

**Map 12:** Road Volume Capacity Ratio – Route 6 Corridor – Conditions in Year 2020 (Winter)



**Map 13:** Road Volume Capacity Ratio – Route 6 Corridor – Conditions in Year 2020 (Summer)

**Map 14:** Road Volume Capacity Ratio – Route 6 Corridor – Conditions at Buildout (Winter)

**Map 15:** Road Volume Capacity Ratio – Route 6 Corridor – Conditions at Buildout (Summer)

**Map 16:** Road Volume Capacity Ratio – Route 6 Corridor – Conditions at Buildout where 2/3 of Seasonal Housing Units Become Occupied Year Round (Winter)

## **Summary of Potential Future Transportation Problems**

This comprehensive plan recognizes the complex interrelationship between growth, land use, provision of infrastructure and services, access to jobs and educational opportunities, tourism, the maintenance of community character local demographics and the environment. Growth influences land use, which in turn influences the transportation system and ultimately the environment. The Town expects to continue to attract new development and expects increasing growth in tourists, summer population, and visitors to continue. More recent studies by the Cape Cod Commission, The Cape Cod Transportation Council and the RTA broaden this study to provide a vision of all transportation factors. The Outer Cape Capacity Study (OCCS) provides a glimpse into the future of the location of new development, how much would occur, and when buildout would occur.

The OCCS plan recognizes that a future for Eastham which achieves a desired future growth, land use, transportation system and environment must resolve potential conflicts with the transportation system and the costs for additional infrastructure and services. Future capacity with transportation include:

- Insufficient Route 6-roadway capacity to support the projected travel demands expected in the future under current zoning.
- Degradation in safety along Route 6 with additional uncontrolled curb cuts.
- Extensive use of residential roadways parallels to Route 6 as an alternative to Route 6.

As noted earlier, the dual role of Route 6 as the regional highway and "Main Street" does not go unnoticed by residents of Eastham. This dual role creates a precarious situation and is considered to be the major transportation concern not only for the safety of the residents but as a threat to the semi-rural character of the Town, especially, but not exclusively, during the summer months. The two functions of the road are incompatible with each other and with the residential character of the area, which requires numerous curb cuts. Route 6 provides little "friendly" access for the pedestrian or bicyclist, with only two (2) pedestrian signals located along the six- (6) miles of roadway. The posted speed limit is 40 miles per hour along Route 6.

Traffic volumes compiled by the Cape Cod Commission in show that half (1/2) of all traffic entering Eastham along Route 6 at the Orleans rotary exits in Eastham, leaving the remaining half (1/2) to travel northbound to either Wellfleet, Truro or Provincetown. It is inevitable that the Town will continue to share both the positive and negative impacts associated with the National Seashore and through traffic. It is also inevitable that the Outer Cape will continue to remain a destination for those who wish to explore the natural landscape of the area.

This makes it essential that the town government work closely and officially with the National Seashore and other regional transportation organizations.

### **Roadways**

The Massachusetts Highway Department has proposed several traffic mitigation measures for Route 6. The State and the Cape Cod Commission are continuing to study the route and are currently considering the long-term impacts associated with the current Route 6 road design from Dennis through Orleans, including the impacts that would be placed on Eastham. While the long-term destiny of improvements to Route 6 are beyond the Town's jurisdiction and lie with the State, the Town recognizes it plays a key role in the viability of any long-term solutions by controlling land use activities within its jurisdiction.

Additionally, the Town intends to work with the Commission on its Regional Infrastructure and Facilities (RIF) initiative to find solutions to transportation problems beyond its boundaries which impact Eastham, particularly Route 6. A key component of this planning initiative is integrating infrastructure, land use and environmental considerations to direct growth to locations most suited to support it.

Given the current traffic level of service experienced by the Cape and specifically the National Seashore, additional corrective measures must be undertaken along Route 6. During the peak tourist season (mid June to Labor Day), the Seashore receives approximately half of its five million (5,000,000) visitors. It is during this time that most of the accidents and other traffic-related problems associated with a high volume (e.g., parking and congestion) occur.

The long range vision for Eastham's roadway system is to ensure that future needs for travel within the Route 6 corridor do not cause the need for additional through lanes beyond the existing four through lanes. The only way this can be accomplished is through adjustments in the amount and intensity of future development potential in Eastham and the preservation of land for open space and increased use of public transportation. The Land Use and Open Space sections further address this issue and propose exploring measures to control curb cuts and limit/control development intensity in the corridor to reduce traffic conflicts and improve circulation and public safety. The vision for Route 6 also includes incorporating changes that would reduce the number of conflicts with current access. Further study of the Route 6 corridor is needed to establish an access management by-law for development, the development of collector roads linking individual commercial developments with Route 6, additional left-turn lanes along Route 6, and the locations where signalization may be needed in the future. Potential for the development of new collector roads may be difficult due to the right-of-way and environmental constraints.

Massachusetts Highway Department recently completed a study of Route 6. Work will involve; Governor Prence Road, the “hump” will be leveled to improve the line of site. (A traffic signal will not be installed). Major work to include new traffic signals to optimize timing and visual “walk” signals for pedestrians and bicycles to be installed at Samoset, Brackett, and the Salt Pond/National Park Visitors Center is programmed for the fall of 2002.

### **Signage**

Route 6, from Provincetown to Bishop, Ca. is officially known as the “Grand Army of the Republic Highway.” A sign at the Rotary into Eastham should note this designation.

The rotary and other recently installed signs along Route 6 do not meet federal guidelines.

Advance signage of destination towns, distance, and junctions with Route 6 and 28 are missing. Yield signs should be placed on the left of the roadway as well as the right in order that drivers – who are looking left at traffic already circling the rotary – will realize that they do not have the right-of-way when entering the rotary. Pavement marking should be painted on the roadway to emphasize the yield requirement. Signs indicating “No Turns” should be replaced by the symbol sign for “No Left Turn.” To encourage driver observation of the 40-mph speed limit on Route 6, appropriate signs should emphasize enforcement of this limit. Consideration should be given to installing blue service guide signs in advance of both Eastham Center and North Eastham showing symbols for service available (i.e. gas, food, etc.).

Signage on town roads has been added incrementally over the years, leading to significant clutter and distracting from the key messages. Compounding this problem, warning signs that are no longer needed have never been removed (there are many examples of signs advising of “Blind Driveways” that are now easily visible; a “Deaf Child” sign on Massasoit Road still remains long after the two individuals in question reached adulthood).

Signage employs an inconsistent mix of words and symbols to convey the same message. In many instances, warning signs are ineffective because they employ two or more words to get their message across with the result that they are hard to read and absorb by the driver moving at post speed limit. Moreover, they may be unintelligible to foreign visitors of immigrant workers with limit knowledge of the English language. For instance, a sign such as “Bike Crossing Ahead Use Caution” (on 5 lines) should be replaced by the simple symbol of a bicycle.

When the Federal Highway Administration’s Manual of Uniform Traffic Control Devices offers a choice between a symbol sign and a word sign (for regulatory, warning, guide, and direction signs), the former should always be selected.

### **Bicycle and Pedestrian**

Pedestrians and bicyclists for transportation and recreational purposes heavily utilize the Cape Cod Rail Trail through Eastham. The Town should make every effort to encourage these uses with a locally based marketing approach for all visitors and year-round residents, which

encourages non-automobile travel. A bicycle bridge is currently under construction, linking the Eastham bike trail to the center of Orleans and beyond. Construction is scheduled for completion in November 2002. The lack of signage along the Route in Eastham makes the trail difficult for users to reach their destination. Distance markers should be added.

New signage is need along bicycle and pedestrian paths to clarify where intersecting roads lead. The Cape Cod Rail Trail, in particular, would benefit from signage directing cyclists to Bay, pond, and Atlantic beaches as well as to year-round refreshments, retail stores, and the National Seashore Visitors Center. Signage should note Eastham's many historical attractions.

Improved connections between the Cape Cod Rail Trail and Seashore bike path to other areas in Town are needed. In addition, bicycle travel along Route 6 should be discouraged, since a safe alternative route exists.

Sidewalks, where they exist along Route 6, are especially utilized during the tourist season. Pedestrian crossings, however, for the most part are absent. The area of Brackett Road and Route 6, with perhaps the most commercial activity in Town, has limited sidewalks and no pedestrian crossings. Many residents along Massasoit Road, Oak Road and the Old State Highway utilize this commercial center of Town, and would prefer to access the businesses by bicycle and foot. Therefore, sidewalks and a pedestrian crossing would be considered appropriate for this area. Additional pedestrian crossings and sidewalks should be considered at each of the problem areas identified above. The sidewalk along the eastern side of Route 6 is unsafe in several respects for both pedestrians and bicyclists. Utility poles are often planted in the middle of the path, making passage difficult, curb cuts remain where there is no longer a driveway, and snow is never removed in winter.

### **Parking**

Despite a considerable amount of Town controlled parking, there are severe parking constraints in certain areas. Lack of parking for tourist-related commercial establishments (North Eastham) and attractions (Library, Windmill and beaches) pose a serious problem for vehicular circulation. This situation coupled with an increase in bicycle and pedestrian traffic, as well as parking requirements associated with the completion of the Cape Cod Rail Trail, will only exacerbate the situation. Although municipal parking lots are provided for various Town buildings and recreational sites, there is little parking provided for tourist-related activity; therefore, as increases in tourism and population occur, additional parking facilities should be considered for both the Seashore and Bayside beaches.

By maximizing the use of existing parking areas and limiting the creation of new parking, controlling the capacity of available parking is one of the best ways to encourage the use of alternatives to automobile travel. To improve transit opportunities for residents and visitors traveling within Eastham, creation of shuttle bus service with routes within a short walk of major parking lots, principal residential areas and motels, traveling to popular destinations (i.e., beaches and attractions), would encourage users to "leave their cars behind".



Prior to the construction of additional parking facilities, the Town should explore complementary use of existing parking. For example, peak-parking demand for Cape Cod Rail Trail parking occurs on weekends and summer weekdays. The Orleans District Court House parking has limited weekend use; the Nauset Regional High School parking lot has limited summer use. The Town should work closely with the National Seashore to ensure those adequate parking facilities and safeguards are in place. If the need arises for additional Seashore parking facilities, the Town may wish to provide satellite parking and shuttle service for a fee. Prior to expanding Town parking facilities, the Town should consider the additional strains that may be placed on other resources. For example, increasing beach parking must be balanced with adequate staffing for supervision and sufficient rest room capacity.

### **Public Transportation**

A survey done by the Lower Cape Community Coalition in March '02 showed a need for youth-based transportation service for jobs, recreation, between towns, etc. Marketing and teen endorsement will be essential in addressing needs.

With the anticipated increase in population, especially among older residents, an increase in dependency on public transportation will occur. Most recent figures published in the Cape Cod Voice indicated that Eastham ranks 10th in the Commonwealth in residents 65 and older those percentages are expected to grow. Increases in tourist-related traffic may make some reluctant to drive. These factors point to a need for increased door-to-door van service or for a coordinated pick-up service to central bus stops. Fast, reliable and frequent bus service between Eastham and other major destinations such as Hyannis, Cape Cod Community College, Boston, and the regional airports would benefit job seekers, residents and tourists. Shuttle bus service between Outer Cape towns and the National Seashore beaches in Eastham and Wellfleet should be considered to relieve summer traffic congestion on Route 6. Development of the Orleans and Chatham COA's bus "BLT" (Boston Local Transit) is a positive example of a coordinated transit plan for the elderly.

- The following recommendations are made in an effort to improve the existing level of transportation service to the Town of Eastham. In order to accomplish many of the actions listed below, the Town must work with other Outer Cape communities as well as regional and state agencies such as the National Seashore, Cape Cod Commission, the Cape Cod Regional Transit Authority, the Massachusetts Highway Department and the Cape Cod Transportation Council. We need to maintain an active voice on the Regional Transit Board. Also, Eastham should appoint a Transit Task Force with representatives from the COA, Seashore, Highway Department, Regional Transportation Authority, Nauset Schools, Selectmen, and the Chamber of Commerce.
- Further study of the Route 6 corridor is needed, including investigation of an access management by-law for development; the development of collector roads linking individual commercial developments with Route 6; additional left-turn lanes along Route 6; and the location where signalization may be needed in the future. This study should include cost estimates and funding sources, such as property tax revenue, new development impact fees, and state transportation funds.

Transportation improvements for Route 6 should include incorporating changes to reduce the number of conflicts with access and adjusting land use in the Town to eliminate the need for additional through lanes.

## **Implementation**

### **Recommended Town Actions**

- A. Identify areas in need of curb cut reductions and/or access improvements and make recommendations for the accomplishment of these reductions to the Massachusetts Highway Department. The Planning Board should develop a comprehensive strategy for reducing and limiting curb cuts along Route 6 in coordination with the Massachusetts Highway Department. In addition, a Site Plan Review process, which addresses curb cut reductions and access control, should be developed.
- B. Develop an aggressive open space preservation program to reduce the build-out potential of the Town (see Open Space section).
- C. Establish a traffic impact assessment program to require an evaluation of the impacts of new developments and expansions (especially non-residential) on Levels of Service for local and state roadways.
- D. Request that the Massachusetts Highway Department provide turning lanes and a pedestrian crossing at Brackett Road and Route 6. Further, the Town should consider additional turning lanes, turn restrictions, signalization, directional restrictions and pedestrian crossings at other dangerous intersections or problem areas along Route 6.
- E. To enhance and maintain public safety of the bike trails, the Town should initiate a program to inform both the Commonwealth and National Seashore of needed maintenance to their respective bike trails.
- F. Sidewalks should be constructed along the easterly side Route 6 and in the vicinity of Massasoit Road, Oak Road and the Old State Highway, as well as other areas, which are heavily used by pedestrians. Additionally, since primarily only the west side of Route 6 has sidewalks, additional locations other than those noted above should also be considered along the east side of Route 6 and other locations in town as conditions warrant.
- G. Identify and re-establish (if appropriate) any abandoned rights-of-way.
- H. Work with the Massachusetts Highway Department to develop a sidewalk maintenance program/agreement for Route 6, including regular mowing, sweeping and plowing to enhance pedestrian safety.
- I. Work with the appropriate agency(s) to remove, relocate or bury utility poles.

- J. A Town Hall area plan should be created to include signage, lighting, sidewalks, undergrounding of utilities, and additional traffic mitigation measures for this area, both to slow traffic speed and to increase the awareness of Eastham's civic and historic (Windmill) center.
- K. Begin to identify Route 6 as "Main Street" or "Grand Army of the Republic Highway" to give Eastham a greater sense of place. Signage entering the Town can emphasize this recognition, which should distinguish this portion of Route 6 from any other.
- L. The Bikeways Committee recommends improvements and has encouraged bicycle use for both recreational purposes and commuting to neighboring communities (see Open Space section). Consideration should be given to installation of bicycle racks and rentable storage bins in appropriate locations. Bicycle racks should be provided at all Town beaches, in environmentally appropriate locations. The Town should work with the State and National Seashore to maintain bicycle paths, including regular mowing, sweeping and plowing. The committee should also encourage the State to consider additional rail trail parking including using school parking lots, the Orleans District Court parking lot and other locations that are not heavily used on weekends or during the summer. These options should be explored prior to the construction of new parking lots.
- M. Increase buffers and/or adopt a land coverage requirement to reduce the intensity of non-residential development and resulting vehicle trips per day.
- N. Update and Implement the recommendations of the Eastham Pavement Management Study, and include the Cape Cod Rail Trail and National Seashore bicycle path as part of the program. The Town should coordinate with the State and National Seashore to ensure adequate maintenance of bicycle paths.
- O. Provide signage along the Cape Cod Rail Trail to indicate beaches, commercial areas and other attractions within the Town.
- P. Work with neighboring public transportation communities, the State, the Cape Cod National Seashore, Cape Cod Regional Transit Authority and other public transportation agencies to improve seasonal bus service in the Outer Cape, including increased shuttle service to National Seashore beaches from remote parking areas and town center locations. Town should explore the feasibility of using existing parking lots to meet seasonal needs. The Town will work to identify and create appropriate bus stops and shelters.
- Q. Explore ways to expand regional transit service for Eastham.
- R. Local by-laws should be considered to increase lot sized and the frontage of lots on Route 6.
- S. Purchase available land that fronts on Route 6.
- T. Traffic signals on Route 6 should include “walk” signals for pedestrians and bicycles.

- U. Ensure Highway signage is in accordance with the Manual of Uniform Traffic Control Devices.
- V. Require regulatory and warning traffic signs that employ symbols.
- W. Remove inappropriate and unnecessary traffic signage.
- X. Remove signage no longer appropriate.
- Y. Work with Mass Highway and the Cape Cod Commission to pursue installing a traffic signal at the Route 6 / Governor Prence Road intersection to improve traffic and pedestrian safety. Including a pedestrian crossing phase would provide safe access for residents on the east side of Route 6 to the existing sidewalk network located on the westerly side.

See “Transportation”, “Capital Facilities and Infrastructure”, and “Land Use” in the Implementation section.